REMARKS

This application has been reviewed in light of the Office Action dated November 20, 2002. Claims 1-51 and 54 are pending in this application. Claims 52 and 53 have been cancelled, without prejudice or disclaimer of subject matter (these claims accordingly will note be mentioned further). Claim 54 has been added to provide Applicant with a more complete scope of protection. Claims 1-3, 10-13, 17-22, 29-32, 36-38, 42 and 45-48 have been amended to define still more clearly what Applicant regards as his invention. Claims 1, 17-20, and 36 are in independent form. Favorable reconsideration is requested.

The title and abstract have been amended as kindly suggested by the Examiner. In addition, the dependency of Claim 42 has been corrected.

The Office Action rejected Claims 1-51 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,268,851 B1 (Bricklin et al.) in view of U.S. Patent 6,310,630 B1 (Kulkarni et al.).

In relation to the rejections under Section 103 in general, it is submitted that these have arisen through a misunderstanding of the present invention as described and claimed and the relationship to the various prior art citations.

The present invention is concerned with providing a hard copy (linear) document which is sourced from a non-linear electronic document. The non-linearity of the electronic document is realized by the electronic document including a number of referential links between items of information. The specifics of those aspects of the present invention to which the various independent claims are directed, are concerned with the optimized reproduction of the non-linear electronic links, found in the source electronic document, as user interpretable functional links in the final printed document. It is further noted that while the

claims refer to a method of creating a "document suitable for hard copy reproduction" the Examiner will appreciate that the "document" can also be an electronic document which includes the various features as claimed and which can once electronically created, then be readily printed if and as desired.

For example, independent Claim 1 is directed to a method of creating a document suitable for hard copy reproduction. That method comprises receiving information from at least one electronic source document, which information includes a plurality of referential links establishing corresponding referential paths between components of that information. There is defined a physical structure of the document suitable for hard copy reproduction and sufficient to reproduce the information, and there are defined a plurality of document links associated with the physical structure and corresponding to the referential links. A user interpretable functional link is assigned to each such document link, and a number of the user interpretable functional links are optimized by assigning plural ones of the document links to at least an individual one of the functional links.

In. contrast, *Bricklin* relates to a method of authoring electronic documents. The authored electronic document arising from the arrangement of *Bricklin* is, fox example, a "source electronic document" such as can be used and interpreted by means of the present invention for the production of a hard copy document. *Bricklin* is concerned with an arrangement that facilitates easy authoring of such an electronic source document and obtaining mappings (ie, links) between the various items of information being sourced and which collectively form the authored electronic source document.

Kulkarni relates to generating a browsable history of locations visited during a web browsing session. The browsable history groups together locations based upon the server

accessed and a reverse chronological order of access. This browsable history can then be presented using an "electronic book" incorporating a series of tabs. This form of presentation of electronic information is akin to the "tab" presentation of information used in many operating systems and also to the bookmarks familiar from many Internet browser applications.

Neither *Bricklin* nor *Kulkami* however is concerned with the subject matter of the present independent claims of converting an electronic document that includes referential links into a printable document, where the referential links are not only reproduced as user interpretable functional links, but are also optimized by which plural referential links may be represented as a single functional link.

Applicant now addresses the specific points raised in the Office Action.

Paragraph 12 cites column 31, line 23, of *Bricklin*, as allegedly disclosing a printer for hard copy reproduction. In this regard, the words "print" and "printer" appear only twice in *Bricklin*, these being at column 1, line 13, and column 31, line 23. At column 1, *Bricklin* states: "hypermedia works do not have the serial structure of printed documents in which information is presented to a reader in a fixed order". At column 31, *Bricklin* merely notes the existence of a printer in the computer system of Fig. 21. There is no disclosure in *Bricklin* of any specific purpose of that printer. While a reasonable person might readily assume that it is for the reproduction of an electronic document, since electronic documents such as Internet web pages and the like have long been reproducible via a printer, there is nothing in *Bricklin* that in any way relates to formation of a document *printable* with various *user interpretable* functional links. *Bricklin* in this regard is, at best, no different to any application that can print its own output.

Next, the Office Action asserts that *Bricklin* at column 10, lines 39-44, teaches

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a stylized image of a page text as being equivalent to the physical structure of a document found in Claim 1. With respect, this is incorrect. The stylized image referred to by *Bricklin* is little more than an iconic representation of a document layout. In this regard, the Examiner is referred to column 10, line 61-67, of *Bricklin*, which although it clearly asserts that the stylized image is intended to represent the document, nonetheless does not define the physical structure of the document in a form suitable for hard copy reproduction, as recited in the present independent claims.

Reference is then made to *Brieklin* at column 1, lines 17-45, as teaching the plurality of links defined in paragraph (c) of Claim 1. The links defined in paragraph (c) of Claim 1 are "document links" and correspond to the referential links of the electronic source document (see paragraph (a) of that claim). In contrast, the links referred to in *Bricklin* are those between the lexia, in general represented by Figs. 3, 4 and 5. In contrast, in the method of Claim 1, the document links are associated with the physical structure of the document to be reproduced (ie. the number of physical pages and the distribution of components of information across those pages).

The Examiner then refers to *Bricklin* at column 13, lines 25-64, as teaching the user interpretable functional link of Claim 1. As correctly noted by the Examiner, *Bricklin* teaches incorporating a notch into a caricature of a page image so as to provide a visual distinction between one caricature and other caricatures. With respect, this is the only function performed by the notch. The notch merely provides a visual reference to the user of the electronic document of *Bricklin* that one caricature is different from another. This feature of *Bricklin* is no different to any computer system which has separate icons or tabs representing different pieces of information. Other than being visually identifiable, the notch in the caricature

performs no other function. This does not in any way suggest the user interpretable functional links recited in Claim 1, which are links that can be traversed by a user through the physical structure of a printable document so as to traverse from one component of information to another. The functional links in Claim 1 are not only notches and tabs, but can include lines linking text and the notches and tabs. Accordingly, the functional links have a specific purpose in creating a functional link between components of information, and that purpose is not at all taught or even hinted at in *Bricklin*. The functional links are, and must be, physically traversable, in order to be useful in the printed document, while in contrast, the notch in *Bricklin* performs as noted nothing more than a mere identification of the relevant caricature. The caricatures are virtual (electronic) links and do not perform the functions recited in Claim 1.

The Office Action then refers to *Bricklin* at column 10, lines 39-44, and column 13, lines 25-64, as teaching the caricature of the stylized image of a page of text reflecting the lexia where each caricature comprises a notch on the top edge of the caricature. This does not, however, teach or suggest the specific recitations of paragraph (e) of Claim 1, of optimising the number of functional links.

The Office Action also refers to *Kulkarni*, at column 1, lines 39-67, and column 8, lines 13-23. As noted above, *Kulkanu* relates to the forming of tabs on an electronic document to provide ease of selection of web browsing histories. However, *Kulkarni*, both at column 1 and column 8, is silent as to any purpose of any tab other than referring to a single entry in the browsing history. The disclosures of *Kulkarni* and *Bricklin*, either individually or in any permissible combination, do not even hint at assigning *plural* links to an *individual* one of a group of functional links to optimize the number of functional links, as recited in Claim 1.

There are a number of clearly distinguishing features of Claim 1 that distinguish that claim from the combined disclosures of *Bricklin* and *Kulkarni*. They include:

1. The creation of a document suitable for hard copy reproduction;

2. converting referential links in the electronic source document into document links associated with the physical structure of the document to be printed;

3. creating user interpretable functional links (ie. physical tabs, cut outs and lines that represent the document links traversing pages of the printable document); and

4. optimising the functional links whereby plural document links are assigned to a single functional link.

None of these features are explicitly disclosed in either *Bricklin* or *Kulkarni*, nor can it be said that they are suggested by those patents.

For these reasons, it is believed to be clear that Claim 1 is allowable over *Bricklin* and *Kulkarni*, taken separately or in any permissible combination (if any).

Like Claim 1, independent Claims 17-20 and 36 each relate to the creation of a linear document from a non-linear hypermedia source. In each of those claims the linear document is formed through an optimization of physical links in the document, which functionally replace the referential links in the hypermedia source. Each of these claims, therefore, is allowable over *bricklin* and *Kulkarni* for at least the same reasons as is Claim 1.

Independent Claim 54 is directed to the actual document formed by the method of Claim 1, and is allowable for the same reasons. Notably, neither *Bricklin* nor *Kulkarni* results in linear documents having optimized physical links as claimed.

The other claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the

same reasons. For example, regarding Claim 2, there is no disclosure or suggestion in *Bricklin* nor *Kulkarni* of merging document links to form a single link in a printable document. Regarding dependent Claim 3, as noted above, the notch of *Bricklin* is not a link but rather a visual distinguisher between the various caricatures. The notch performs no other function and, of itself, does not provide any link to another portion of the document.

Regarding Claim 4, the notch of *Bricklin* in no way suggests the nesting of indicia recited in this claim. *Bricklin* provides no function to the notch other than to be visually identifiable. Therefore even a skilled reader is in no way led to assume that the notches may be nested to provide some unexplained alternate function.

Regarding Claim 5, even if *Bricklin* at column 19, lines 9-16, teaches modifying a graphical representation of a "special function element", that does not disclose or suggest modifying a document. Regarding Claim 6, the Office Action acknowledges that *Bricklin* teaches providing a distinctive appearance to a notch which, as noted above in respect of Claim 3, performs no function other than to visually identify the particular caricature. Such a notch does not provide a functional link in the manner recited in Claim 6.

In the comments regarding Claim 7, the Office Action again improperly extrapolates the language of *Bricklin* regarding a "special function element" to refer to a "document" as referred to in the present claims. The "special function element" of *Bricklin* as noted at column 19, lines 13-16, is an individual item of information forming part of the document and not of the document itself.

In respect of Claim 8, while *Kulkarni* teaches adding tabs that link to a particular page, there is no disclosure that this can or should be performed in combination with optimizations such as are recited in sub-paragraph (e) of Claim 1, from which Claim 8 depends.

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The comments in respect of Claim 10 contained in the Office Action again demonstrate misinterpretation of the present invention. In the Office Action, it is suggested that *Bricklin* at column 13, lines 25-64, teaches "a printer which may be capable of printing notch caricature (page images)". While the notch caricature of *Bricklin* may provide a link from one part of the electronic document of *Bricklin* to another part of that electronic document, there is no teaching or suggestion in *Bricklin* that when that electronic document is ultimately printed, that the notch caricature in any way shape or form provides (or even could be used to provide) a direct link through the various pages of the printed document between the two portions of information. The printing of the electronic document of *Bricklin* would merely result in that which would be obtained when any web page containing links is printed. Such is a linear document which provides no access to the non-linear links afforded in the electronic document. In stark contrast, the incorporation of the user interpretable functional links of Claim 1, from which Claim 10 depends, provides the functionality in the printed document of the electronic links contained in the electronic source document. *Bricklin* does not address the problems discussed in the background of the present application. These comments also apply to the rejection of Claim 11.

Regarding Claim 12, while *Kulkarni* forms links using tabs, there is no disclosure in *Kulkarni* of grouping the tabs so as to form optimized links between different pieces of information. To modify the arrangement of *Bricklin* using *Kulkarni* would form a document having tabs and notches but no other components of the "user interpretable functional link" which links one portion of information directly to another portion of information. The combination further would still provides no suggestion of optimizing the number of links through combining links to associated information.

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Claim 13 relates to having a predetermined stricture and importing the source information into that structure to create the document. There is no disclosure of such in *Bricklin* as asserted. In *Bricklin*, the document is authored from the outset according to the desired structure.

The comments above relating to the notched caricatures of *Bricklin* apply also to Claim 14. There is no disclosure or suggestion in either patent for nesting functional links either using tabs or cut outs so as to optimize links between multiple pages in the printable document.
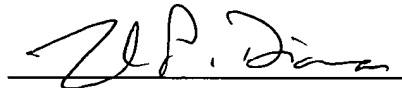
The foregoing remarks directed to various of the dependent claims all apply to corresponding claims dependent from others of the independent claims.

In any event, since each dependent claim is deemed to define an additional aspect of the invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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<u>VERSION MARKED TO SHOW CHANGES MADE TO THE TITLE</u>

[HYPERPRINT] METHOD AND APPARATUS <u>FOR REPRODUCING A</u>

<u>LINEAR DOCUMENT HAVING NON-LINEAR REFERENTIAL LINKS</u>

<u>VERSION MARKED TO SHOW THE CHANGES MADE TO THE CLAIMS</u>

1.   (Amended) A method of creating a document suitable for hard copy

reproduction, said method comprising the steps of:

(a)   receiving information from at least one <u>electronic</u> source

<u>document</u>, said information including a plurality of referential links establishing corresponding

referential paths between components of said information;

(b)   defining a physical structure of said document <u>suitable for hard</u>

<u>copy reproduction and</u> sufficient to reproduce said information;

(c)   defining a plurality of document links <u>associated with said</u>

<u>physical structure and</u> corresponding to said referential links;

(d)   assigning a user interpretable functional link to each said

document link; and

(e)   [optimising] <u>optimizing</u> a number of said user interpretable

functional links by assigning plural ones of said document links to at least an individual one of

said functional links.

2.   (Amended) A method according to claim 1, wherein said physical

structure comprises at least one single <u>printable</u> page and said functional links comprise at least

one [indicia] <u>indicium</u> printable onto said single page, and step (e) comprises merging plural

ones of said document links to form a single said indicia associated with a component on said

page.

3.   (Amended) A method according to claim 1 or 2 wherein said physical

structure comprises plural <u>printable</u> pages and said functional links comprise at least one cut-out

tab formed in at least one of said pages, and step (e) comprises assigning plural ones of said

document links to a single one of said cut-out tabs.

10.   (Amended) A method according to claim 1, further comprising the step

of associating a predetermined stylistic layout with said [optimised] <u>optimized</u> functional links so

as to vary a hard-copy reproduction of said document.

11.   (Amended) A method according to claim 10 wherein said

predetermined stylistic layout implements the formation of cut-out tabs as at least some of said

[optimised] <u>optimized</u> functional links.

12.   (Amended) A method according to claim 1, wherein step (e) comprises

grouping said document links according to predetermined criteria associated with said document

links, each said group having associated therewith at least one corresponding [optimised]

<u>optimized</u> functional link.

13. (Amended) A method according claim 1 or 12 wherein step (e) comprises the sub-steps of:

(ea)   importing said information into said structure to form said document; and

(eb)   applying said [optimised] optimized links to said document.

17. (Amended) An authoring system for the creation of a linear document having non-linear referential links, said system including:

means for specifying a linear document structure and the hyperlinks of a hypermedia source document;

means for associating said hyperlinks with physical links able to be formed in pages of said linear document;

means for modelling each said physical link using a one-dimensional vector; and

means for [optimising] optimizing an assignment of said physical links to one or more of said hyperlinks.

18. (Amended) An authoring system for the creation of a linear document having non-linear referential links, said system comprising:

means for assessing hyperlinks within a source hypermedia document to which a linear document structure is to be applied;

means for associating said hyperlinks with physical links able to be formed in pages of said linear document;

means for modelling each said physical link using a one-dimensional vector; and

means for [optimising] optimizing an assignment of said physical links to one or more of said hyperlinks.

19.   (Amended) A system for the creation of a linear document having non-linear referential links, said system comprising:

means for assessing hyperlinks within a source hypermedia document to which a linear document structure is to be applied;

means for associating said hyperlinks with physical links able to be formed in pages of said linear document;

means for modelling each said physical link using a one-dimensional vector;

means for [optimising] optimizing an assignment of said physical links to one or more of said hyperlinks;

means for applying said linear document structure and said [optimised] optimized physical links to said hypermedia document to produce said linear document; and

means for reproducing said linear document.

20. (Amended) A computer program product incorporating a computer readable medium incorporating a series of instructions for creating a document suitable for hard copy reproduction, said instructions implementing the steps of:

(a) receiving information from at least one <u>electronic</u> source <u>document</u>, said information including a plurality of referential links establishing corresponding referential paths between components of said information;

(b) defining a physical structure of said document <u>suitable for hard copy reproduction and</u> sufficient to reproduce said information;

(c) defining a plurality of document links <u>associated with said physical structure and</u> corresponding to said referential links;

(d) assigning a user interpretable functional link to each said document link; and

(e) [optimising] <u>optimizing</u> a number of said user interpretable functional links by assigning plural ones of said document links to at least an individual one of said functional links.

21. (Amended) A computer program product according to claim 20, wherein said physical structure comprises at least one single <u>printable</u> page and said functional links comprise at least one indicia printable onto said single page, and step (e) comprises merging plural ones of said document links to form a single said indicia associated with a component on said page.

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22.   (Amended) A computer program product according to claim 20,

wherein said physical structure comprises plural printable pages and said functional links

comprise at least one cut-out tab formed in at least one of said pages, and step (e) comprises

assigning plural ones of said document links to a single one of said cut-out tabs.

29.   (Amended) A computer program product according to claim 20, further

comprising the step of associating a predetermined stylistic layout with said [optimised]

optimized functional links so as to vary a hard-copy reproduction of said document.

30.   (Amended) A computer program product according to claim 29

wherein said predetermined stylistic layout implements the formation of cut-out tabs as at least

some of said [optimised] optimized functional links.

31.   (Amended) A computer program product according to claim 20,

wherein step (e) comprises grouping said document links according to predetermined criteria

associated with said document links, each said group having associated therewith at least one

corresponding [optimised] optimized functional link.

32.   (Amended) A computer program product according to claim 20

wherein step (e) comprises the sub-steps of:

(ea)   importing said information into said structure to form said

document; and

(eb)   applying said [optimised] <u>optimized</u> links to said document.

36.   (Amended) A system for creating a document suitable for hard copy

reproduction, said system comprising:

first means for receiving information from at least one <u>electronic</u> source

<u>document</u>, said information including a plurality of referential links establishing corresponding

referential paths between components of said information;

second means for defining a physical structure of said document

<u>suitable for hard copy reproduction and</u> sufficient to reproduce said information;

third means for defining a plurality of document links <u>associated with</u>

<u>said physical structure and</u> corresponding to said referential links;

fourth means for assigning a user interpretable functional link to each

said document link; and

fifth means for [optimising] <u>optimizing</u> a number of said user

interpretable functional links by assigning plural ones of said document links to at least an

individual one of said functional links.

37.   (Amended) A system according to claim 36, wherein said physical

structure comprises at least one single <u>printable</u> page and said functional links comprise at least

one indicia printable onto said single page, and said fifth means comprises means for merging

plural ones of said document links to form a single said indicia associated with a component on said page.

38.   (Amended) A system according to claim 36 wherein said physical structure comprises plural <u>printable</u> pages and said functional links comprise at least one cut-out tab formed in at least one of said pages, and said fifth means comprises means for assigning plural ones of said document links to a single one of said cut-out tabs.

42.   (Amended) A system according to claim [43] <u>41</u> further comprising means for retaining said presentational style of said document in a template for formatting at least one subsequent document with said presentational style.

45.   (Amended) A system according to claim 36, further comprising means for associating a predetermined stylistic layout with said [optimised] <u>optimized</u> functional links so as to vary a hard-copy reproduction of said document.

46.   (Amended)   A system according to claim 45 wherein said predetermined stylistic layout implements the formation of cut-out tabs as at least some of said [optimised] <u>optimized</u> functional links.

47.   (Amended) A system according to claim 46, wherein said fifth means comprises grouping said document links according to predetermined criteria associated with said

document links, each said group having associated therewith at least one corresponding

[optimised] <u>optimized</u> functional link.

48.　　(Amended) A system according to claim 36 wherein said fifth means

comprises:

means for importing said information into said structure to form said

document; and

means for applying said [optimised] <u>optimized</u> links to said document.

52. and 53.　(Canceled)

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